

forming the forest east of the divide appear to differ considerably from those of the west, due doubtless to the greater precipitation of moisture on the latter region. Near the limit of timber and in open ground, where the effect of such conditions would not be so marked, they appear to be nearly identical.

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OCTOBER 16.

Dr. BENJAMIN SHARP in the Chair.

Twenty-five persons present.

*Weather Predictions.*—MR. HARVEY M. WATTS remarked that a new epoch is about to dawn in meteorological research, in that the United States Weather Bureau expects within a month to receive daily reports from the entire northern (circum-Polar) hemisphere—Europe, Siberia, Alaska, and so on around from west to east—allowing the meteorologists for the first time to have synoptic charts made covering this immense area of the inhabited globe.

In explaining the significance of this, Mr. Watts went into a careful survey of the great basic causes of weather and climate variations. He called attention to the universal drift of the general circulation from west to east about the Pole in the regions north of the Tropics, in which general circulation are carried by the travelling cyclones and anti-cyclones (centers of low and high barometric pressures), and he indicated how the paths of these travelling eddies were determined by the pressures and location of the sub-Tropical high pressure belts, which form in the Atlantic and Pacific Oceans huge permanent anti-cyclones, upon whose seasonal shifting and variations in pressure depend the general variations in weather and climate.

The speaker called attention to the fact that the variation in place and pressure of these anti-cyclones (the sub-Tropical high pressure belts), it was now held generally by meteorologists, were due to variations in the radiation from the sun. It is known that the sun is a variable star, whose radiation varies from time to time as much as ten per cent.

These solar variations affect the pressure in the sub-Tropical region, and the variations in the pressures in the sub-Tropical region in turn affect atmospheric pressures the earth over, determining the path of storms and clear weather phenomena, and also general climatic effects, such as excessive rains, droughts, hot and cold summers and their contraries.

The following were ordered printed: